

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An imaging device, comprising:

a storage unit which pre-stores information representing a relation between ~~one of a~~ dark current ~~components~~ component being superimposed on a pixel signal of each of effective pixels and an output signal of ~~an each of~~ optical black ~~pixel arranged in a predetermined optical black area on an imaging sensor, pixels,~~ said dark current ~~components~~ being superimposed on pixel signals of effective pixels, respectively, pixels being arranged in a predetermined effective pixel area on the an imaging sensor; ~~sensor, and said optical black pixels being arranged in a predetermined optical black area which is a different area from said effective pixel area on the imaging sensor;~~

a dark current obtaining unit which obtains dark current ~~components~~ component superimposed on said pixel signals of each of said ~~respective~~ effective pixels based on both said information stored in said storage unit and the output signal of each of said optical black ~~pixel; pixels;~~ and

a correcting unit which corrects said dark current ~~components~~ component obtained by said dark current obtaining unit according to said pixel ~~signals; signal, wherein~~

the information stored in said storage unit is information representing relations between the dark current component of each of said effective pixels on said effective pixel area and the output signal of one of said optical black pixels respectively arranged in corresponding position to that of each of said effective pixels on said optical black area.

2. (Currently Amended) The imaging device according to claim 1, wherein the information stored in said storage unit is information representing a ratio of said ~~one of~~ dark

current ~~components~~ component to said output signal every one of lines of said effective pixel area.

3. (Currently Amended) The imaging device according to claim 1, wherein the information stored in said storage unit is information representing a difference between said ~~one of dark current components~~ component and said output signal every one of lines of said effective pixel area.

4. (Currently Amended) The imaging device according to claim 1, wherein the information stored in said storage unit is information representing a position of one of said optical black ~~pixel-pixels~~ in said optical black area every one of the effective pixels in said effective pixel area, the one of said optical black ~~pixel-pixels~~ outputting an output signal having a value equal to said ~~one of dark current components~~ component.

5. (Original) The imaging device according to claim 1, wherein said optical black area is composed of the optical black pixel for at least one line from which the output signal is read prior to the pixel signals of the top line of said effective pixel area.

6. (New) The imaging device according to claim 1, further comprising a heat source wherein, the information stored in said storage unit is information representing a coordination of each of said effective pixels on said effective pixel area and one of said optical black pixels on optical black area respectively having a same distance from said heat source to that of each of said effective pixels.